

Wilcox (R. W.)

**Syrup of Hydriodic Acid**

AND  
**Its Uses.**

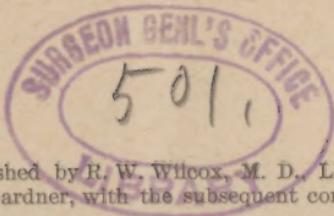
BY  
**R. W. WILCOX, M. D., LL. D.,**  
NEW YORK.

**A Reply Thereto.**

BY  
**R. W. GARDNER, New York,**  
AND  
SUBSEQUENT CORRESPONDENCE







The following paper published by R. W. Wilcox, M. D., LL. D., of New York City and reply thereto by R. W. Gardner, with the subsequent correspondence, will explain itself.

Having waited since July, 1893, and hearing no reply to my last communication, the whole correspondence is now placed before the profession. R. W. GARDNER.

# The Syrup of Hydriodic Acid and Its Uses.\*

By Reynold W. Wilcox, M. D., LL. D.,

Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital; Assistant Visiting Physician to Bellevue Hospital.

The days of unpalatable remedies are past. Elegant pharmaceutical preparations will be adopted just as soon as it is shown that they are efficient and stable. To-day it is necessary that we should cure not only surely and quickly, but, as well, pleasantly. Were I to speak of the Syrup of Hydriodic Acid merely as a palatable remedy, I would not occupy the time of this Society to-night; but when, in addition to its absence of disagreeable qualities, I can speak of it as a remedy that has a wider field of usefulness, presenting none of the disadvantages of the alkaline iodides, I am sure that this evening will be well spent. The Syrup of Hydriodic Acid is presented as a sure and safe relief from what has been termed by Field as the iodide of potash punishment. Hydriodic Acid is no new remedy. It was in 1855 that Murdock devised a thick syrup, because he found that all other solutions were unstable. Not until 1878 was an unalterable syrup placed in the market. Last year for the first time was there presented to the profession a permanent syrup of hydriodic

\* Read before the Clinical Society of the New York Post-Graduate Medical School and Hospital, Nov. 5, 1892,

acid which was of suitable strength, containing 11.84 grains of hydrogen iodide to the ounce of syrup. Hydriodic acid, or hydrogen iodide, is prepared by passing sulphuretted hydrogen, (hydrogen sulphide) into an aqueous solution of iodine. The reaction is  $4I + 2H_2S = 4HI + 2S$ ; the sulphur falls to the bottom as a powder. In the decomposition a small quantity of the iodine is changed into hydrogen iodide, which in turn dissolves more iodine, and also prevents the sulphur from interfering with the process. As a matter of fact, the process is somewhat more complicated as given in the United States Pharmacopœia. The iodine is dissolved in alcohol with a very feeble heat, in a loosely-stoppered flask, and to this solution is added the syrup, previously mixed with distilled water. Through this mixture hydrosulphuric acid gas is passed until it acquires a pure yellowish color and ceases to turn brown on shaking. It is then filtered, to separate the sulphur, through white filtering paper, and the first portions returned until it passes clear. The filter is washed with distilled water, and both the filtrate and washings evaporated on a water-bath at a temperature not exceeding  $131^{\circ}$  F., being constantly stirred until all odor of hydrosulphuric acid has disappeared. When cool the spirit of orange and sugar is added, and when the solution is complete it is strained and placed in bottles.†

The syrup as at present prepared from hydrogen iodide, contains no free iodine, nor is it unsightly like the tincture. At the same time, however, its proportion of iodine is very

† Since this paper was prepared, my attention has been called to a brief but valuable paper by Dr. W. Gill Wylie, published in the *New York Medical Record* in 1879, in which he states that he has used, since 1872, hydriodic acid made from the following formula: Iodide of potash one drachm, tartaric acid one and one-half drachms, water four ounces; one drachm of this mixture equaling in effect on bronchial mucous surfaces twenty grains of iodide of potash. This preparation, if mixed with syrup, remains without decomposition for several days. The Syrup of Hydriodic Acid was made for him by Mr. R. W. Gardner.

great. Iodide of hydrogen contains 99.22 per cent. of iodine and 0.78 per cent. of hydrogen. The syrup prepared by Parke, Davis & Co., which has the advantages over the officinal syrup that it can be used in smaller dose and is of more agreeable taste, and which has been used by me during the past year in my studies, contains two per cent. of absolute hydriodic acid. Hydrogen iodide itself is a colorless, irrespirable, non-inflammable gas. It has a slightly acid reaction in aqueous solution and a sour, styptic taste, but this peculiarity disappears in the syrup.

The syrup is a straw-colored liquid of pleasant acidulous taste. If it is dark-brown, or reddish, or turbid—a condition which I have never found in the preparations which I have made use of—it should be rejected, for this departure from the normal, indicates the setting free of iodine. In point of permanency this preparation is far superior to those commonly met in the market. It is so stable that starch does not bring out any blue color; however it should be kept cold and tightly corked.

Field has found that if the ordinary commercial syrup is exposed to a temperature of 32° or 100° Fahrenheit, it changes its chemical constitution and possesses no deleterious properties. Many years ago Duroy pointed out that iodine was an effectual antiseptic, having a direct action on pus and organized ferments; that aqueous solutions would keep indefinitely; that its syrups do not ferment, and that in combination with syrup, while these syrups remain clear, it is no longer irritant or caustic.

The system can be saturated with it up to the point of iodism; it is readily absorbed and acts promptly, and from an empty stomach, without change, it passes immediately into the

circulation. In ten minutes even, iodine can be detected in the urine when this syrup has been administered upon an empty stomach, which is proof conclusive of its efficiency. It is even more active than the alkaline iodides, because it contains iodine in the best form for assimilation. It is non-irritant, because hydrogen in small quantities neutralizes the irritant effect of the iodine.

We have in the past so frequently made use of the iodide of potash that we all know from unfortunate experience its unpleasant effects, that it produces loss of appetite; that it produces marked mental depression; that it irritates the fauces and the stomach; that it neutralizes the gastric fluids, and that it has a nauseating taste. We know that in the stomach it is changed into a carbonate of potash, which is hurtful to the organism, and especially irritant to the kidneys. We know, further, that in the use of the alkaline iodides, frequently when we least expect it, we get the symptoms of iodism; although many of these cases can be laid to idiosyncrasy, yet we never can be sure that even a small dose may not give rise to these symptoms. Erlich has reported a case in which about three grains of iodide of potash gave marked symptoms of iodism. The swelling of the eyelids, the flow of tears, the flow of watery fluids from the cells of the frontal sinuses, the pain in the forehead, the increased secretion from the Schneiderian membrane, the sleeplessness, the slight angina, the slight trismus, the neuralgias, particularly infra-maxillary or infra-orbital, are familiar to all of us. The irritation of the stomach, a much more constant symptom, may often be so great that we are obliged to omit the remedy. The œdema of the glottis, at times slight, at other times has been severe enough to terminate the life of the patient. Hallopeau has

described the acne form eruptions, bullous eruptions, painful nodes in subcutaneous tissues, and his observations have been frequently confirmed. Severe, and even fatal, cases of iodism are frequently met with in the literature. I believe that it is possible to so saturate a patient with iodine by the administration of hydriodic acid that we can produce iodism, but I feel certain that this syrup is much more manageable; that by careful administration, iodism need not occur and, further, that a part of the symptoms of iodism are due to the influence of the alkaline bases with which iodine is combined.

The syrup of hydriodic acid is absolutely incompatible with all alkalies, all metallic salts, all oxidizing agents, as permanganate and chlorate of potash, the latter converting the hydriodic into iodic acid, which is poisonous. Upon investigation I have found that mixtures of many remedies with this syrup, which are suggested in the literature, are by no means compatible.

As the first important point in the mode of administration, I would emphasize the fact that it should not be given in combination. Secondly, the time of administration is important. The stomach must be empty, so that it can be absorbed without the change produced by food-stuffs, for the iodates produced are toxic. One-half hour before eating, the stomach is of neutral reaction. As a third point I would insist that it should be well diluted with water; that the dose should be dissolved in one-half wineglass, or preferably a full wineglass of water. The dosage varies according to the purpose for which we employ the syrup. Two or three drachms every two hours in acute rheumatism is an amount which should not be lessened until improvement takes place; and this dose should be continued for seven to ten days after the symp-

toms have disappeared, to ensure recovery and prevent relapses. On the other hand, in acute bronchitis I am of the opinion that one-fourth to half a drachm, and this dose gradually increased and frequently repeated, will yield more brilliant results. But in syphilis I would begin with half an ounce and push it rapidly until the patient responds to the remedy.

The cases in which I have used this remedy have been numerous and of considerable variety. In cases of pulmonary disease where the symptom asthma is prominent, with Knight I have had surprisingly satisfactory results, especially when these cases were complicated with chronic bronchitis. There always followed relief of the asthmatic conditions, rapid amelioration of cough, decreased expectoration when it had been profuse, the sputum has become less viscid and thinner, and the general health is likely to improve. As Wile\* has pointed out, in long standing bronchitis, when the lung seems to take on a deeper-seated and less tractable form of the disease, I have found some brilliant results. Here small doses, frequently repeated, are to be advised. I have found, in cases that I have had, of fibrous hardening about tubercular deposits, that the deposit was favorably influenced. I have noticed in the bronchorrhœa of old people that the quantity of expectoration was markedly improved. Aulde has used this remedy with success in those forms of bronchitis which predispose to phthisis. I can confirm his observations, and believe these cases to be those in which the previous endobronchial affection has now become peribronchial, so that the nutrition of the lung is interfered with. Partly due to its antiseptic properties, and probably also to the fact that it liquefies viscid bronchial secretion, is the somewhat limited use of the syrup in the treatment of whooping-cough.

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\*Dr. Wile used Gardner's Syrup in the cases quoted.

\*Bentley, some years ago, [apparently cognizant of the observations of Duroy,] treated thirty-one cases of small-pox in the suppurative and subsequent stages up to complete desquamation, with the happiest results, all recovering speedily.

Syphilis in the latter stages has been treated, by a large number of physicians, with this remedy. Here we note an exception to the statement made above that we can combine it with bin-iodide of mercury without fear of decomposition. The proto-iodide of mercury should not, however, be used with the syrup, as it is converted into the bin-iodide, and we are not certain of the amount of the dose that we administer. Aulde points out that the syrup of hydriodic acid renders yeoman service in removing waste products from the system, but unfortunately lacks the peculiar property of arsenic which causes fatty degeneration of morbid tissue, yet has a field of usefulness which the latter cannot occupy.

†Wile, with exceptional opportunities, has found always satisfactory and frequently surprising results in the use of this remedy in chronic lead poisoning; the additional therapeutics being, insisting that the bowels be kept free, and using electricity, the faradic current; he has also treated arsenical poisoning with success.

‡Burrall suggested the use of this syrup in obesity, it presenting none of the disadvantages of the alkaline iodides. It steadily diminishes the amount of fat without disagreeable symptoms, nor, indeed, does it produce any interference with the general health. Among the somewhat unusual cases that are reported is one by Burrall, where he treated a patient suf-

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\*Dr. Bentley used Gardner's Syrup in these cases.

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†Dr. Wile used Gardner's Syrup in the cases quoted.

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‡Dr. Burrall used Gardner's Syrup in cases quoted, and communicated his experience in a personal letter to me.

R. W. G.

fering from amyloid liver and also from a fatty heart, with considerable success. So also Blackwood† has claimed good results in the treatment of exophthalmic goitre. I believe, however, in the manifestations of what is clinically known as scrofula, such as scrofulous ophthalmia, sympathetic enlargement of the glands in neck and groins, cold abscesses, indolent ulcers, chronic skin affections, especially when combined with cod liver oil, we can obtain surprisingly good results. \*Shoemaker has spoken of the value of this remedy in sciatica. †Field has noted that it removes accumulations of serous fluids. ‡Blackwood extols it in lumbago. I have found in cases of endocarditis, especially in cases of the fibrous variety, and in peri-arteritis, its long continued use is apt to be followed by improvement.

While I have used this remedy with a great deal of satisfaction in many of the pathological conditions which I have here enumerated, I have been more especially interested in the results of the administration of the syrup of hydriodic acid in cases of rheumatism and in the diseases resembling it.

§Craig treated sixteen cases of acute rheumatism, and at the time of the publication of his paper had yet to find a case where this remedy had been properly used and had failed to meet his expectations. It shortens the duration of the disease, relieves pain; it reduces the temperature and leaves the patient without heart complications, preventing exudations and organization of plastic material. I would regard the chronic rheumatic and rheumatoid affections as offering a crucial test for the efficacy of this remedy, and particularly the

†Dr. Blackwood used Gardner's Syrup in cases quoted.

R. W. G.

\*Dr. Shoemaker used Gardner's Syrup in cases quoted.

R. W. G.

†Dr. Field used Gardner's Syrup in cases quoted.

R. W. G.

‡Dr. Blackwood used Gardner's Syrup in cases quoted.

R. W. G.

§Dr. Craig used Gardner's Syrup in cases quoted.

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chronic and intractable cases that a physician to our city charity hospitals meets with, as demonstrating, beyond a reasonable doubt the value of this remedy. If Syrup of Hydriodic Acid will relieve the chronic rheumatics that we meet with in these hospitals, there exists no further necessity for proving its usefulness."

Here follows the history of four cases, treated in Bellevue Hospital, from notes taken by Dr. Cyrus J. Strong, of the resident medical staff.

"Arthritis Deformans.

Subacute Rheumatism.

Acute Articular Rheumatism.

Gonorrhœal Rheumatism.

These cases were selected from the record books as average cases and average results from the use of the Syrup of Hydriodic Acid. The hours chosen for administration of the remedy are the usual hospital hours, and all are not suitable for a remedy like this. Still the results are very satisfactory when compared with those met with after the use of salicylates, alkalies, and other preparations of iodine. Case one showed remarkable improvement. Case two is the average city hospital rheumatism, as a rule entirely rebellious to treatment by the usual remedies. Case three is a similar case which was transferred from another hospital on account of the acuteness of the attacks; here the value of the syrup in an acute exacerbation of a chronic rheumatism is seen. Case four illustrated the antiseptic value of hydriodic acid (Duroy). The result was an eminently satisfactory one, when one considers the tendency of the disease to become chronic in spite of all treatment.

In looking over the records of the cases which have come

under my observation and in which I have used the Syrup of Hydriodic Acid, I feel great satisfaction that I have obtained results equally as good as with the alkaline iodides, and far more pleasantly for the patient, and needing less watchful care on the part of the physician. The Syrup of Hydriodic Acid has never, in my hands, given rise to acne, coryza, nor indeed to any intolerance on the part of the stomach, although I have increased the dose until the necessary effect was obtained. On the other hand, these effects are quickly and surely reached.

#### CONCLUSIONS.

1. In Syrup of Hydriodic Acid we have a palatable and efficient method of administering iodine.
2. The dosage is under control. We can saturate the patient with iodine, yet iodism can be avoided.
3. The field of usefulness is greater than that of iodide of potash or any other alkaline iodide.
4. The failure of administration in former times was due to the impossibility of making a high-class pharmaceutical which should be of sufficient iodine strength and absolutely permanent; here the recent improvements in manufacture are of the greatest importance."

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*Extract from the New England Medical Monthly, April, 1893.*

#### “SYRUP OF HYDRIODIC ACID AND ITS USES.”

##### A REPLY.

By R. W. GARDNER, NEW YORK.

In an article professing to have been written by “Reynold W. Wilcox, M. D., LL. D., professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital,” read before the “Clinical Society of the New York

Post-Graduate Medical School and Hospital," November, 1892, and published in the "*Post-Graduate*" for February, 1893, upon "Syrup of Hydriodic Acid and its Uses," the writer very properly extols the value of this remedy, and in doing so, draws very largely, *verbatim et literatim*, from my published literature, without giving me a particle of credit for the same. In other instances where statements have been made by me, my language has been paraphrased. This would have been gratifying to me, and I should have been placed under obligations to the party (or parties) who prepared the paper, by the fact that he (or they) had considered matter originating with myself of sufficient importance to be embodied, or the ideas which it expressed, in whole paragraphs, in an *original* communication, were it not that he (or they) used these very arguments, which represent the result of considerable study and research of my own during the past fifteen years, as well as the published experience of many eminent physicians in the use of Gardner's Syrup of Hydriodic Acid, for what appears to be the purpose of booming a preparation recently put upon the market in imitation of it.

The writer does me the honor to attribute a portion of my language to Duroy (references to the antiseptic character of the remedy) which must have been a result of unconscious cerebration, for so far as I know, the language and the ideas which it expressed, were my own.

The writer alludes to myself in a foot note, in which he remarks, that 1872 to 1879, I had made a preparation of Hydriodic Acid by double decomposition, for Dr. W. Gill Wylye, of New York. It is true that Dr. Gill Wylye, long previous to my introduction of this preparation in the form now known as Gardner's Syrup of Hydriodic Acid, had suggested to me

the desirability of preparing a more stable preparation of this remedy, and acting upon his suggestion, after many trials and a great deal of investigation by myself, the present Gardner's Syrup was put upon the market, and Dr. Wylie published a paper upon it in the *New York Medical Record*, 1879, Vol. xv. p. 454 (the paper alluded to), and has continued to use Gardner's Syrup, from that day to this, with perfect satisfaction.

As the foot note in the paper in the "*Post-Graduate*" article has been worded in such a manner as to convey the impression that Gardner's Syrup is made by double decomposition, a crude method, in which secondary products form impurities, I would say that Gardner's Syrup is not, and never has been made by double decomposition; upon reading the original paper of Dr. W. Gill Wylie, the unfair statement, or inference, will be apparent.

This allusion to a *past age*, by the writer of the article, is peculiar, when taken in connection with the free use of my *literature of 1892*, without crediting me with it. It is in fact remarkable that the author should have thought of me at all, and he doubtless would not have done so, had his mind not been refreshed by some kind friend, who "called his attention to the brief but valuable" paper of Dr. Wylie, above referred to.

It is interesting to note that the writer in the "*Post-Graduate*" article gives credit in his communication to Drs. Wylie, Knight, Shoemaker, Wile, Field, Bently, Burrall, and Craig, for language which is freely quoted, used by these gentlemen in commendation of *Gardner's Syrup of Hydriodic Acid*, and not only fails to mention this last fact, but refuses to credit me with the matter extracted from my literature, which seems to form the basis of this *original* paper.

The demoralization of the present age is well exemplified, when an honored and respected "Clinical Professor in the New York Post-Graduate Medical School" can descend to copy without credit, and appropriate as his own, language used by another, and not only that, but attempt to use the ideas so obtained against their originator, who rescued Hydriodic Acid from oblivion after it had been expunged from the Pharmacopœia as an impractical and worthless remedy, and through whose efforts and sacrifices of time and money, it has been made available, and its usefulness to the medical profession and humanity, demonstrated.

If the honor of the medical profession is to be preserved and its high character maintained, it will not be by such methods as are here enumerated.

Possibly, the author was not sufficiently cautious in revising matter furnished him for this paper, which might be a mitigating circumstance.

In commenting on the preparation, in the interest of which the paper was evidently written, the author, after admitting that a permanent Syrup was made in 1878, and omitting to mention the manufacturer's name, says: "Last year for the first time was there presented to the medical profession a permanent Syrup of Hydriodic Acid which was of suitable strength, containing 11.84 grains of hydrogen iodide to the ounce of Syrup."

As to what constitutes a suitable strength, is a matter of opinion. The results of treatment which the author has so largely quoted from the experience of the above mentioned physicians, were obtained by the use of Gardner's Syrup, which contains 6.72 grains of hydrogen iodide to the fluid ounce. The more concentrated the strength, the more liability

is there that the Syrup will decompose. The strength of Gardner's Syrup has always been found to be sufficient to produce the most prompt and decided action; in fact the reputation of Hydriodic Acid has been built up by the favorable results achieved by the use of Gardner's Syrup during the past fifteen years; consequently what necessity exists for a greater strength? During the fifteen years' use of Gardner's Syrup, no one has complained of the necessity of a syrup of greater strength, except the writer of the "*Post-Graduate*" paper, and the firm who say they make such a preparation. The present writer believes that a greater strength would be, not only of no advantage, but a positive defect.

The chemical instability of Hydriodic Acid, it must be remembered, had always prevented its use as a medicine, until 1878, when Gardner's Syrup was introduced; up to that time no proper test had been made of its therapeutic value, as decomposition occurred almost as soon as it was prepared. This forbade its use. Consequently, in determining the question of strength, it is necessary to take into consideration the lack of chemical affinity which causes the decomposition, and which is an inherent quality of the combined elements. All other questions must be subordinated to that of a reasonable degree of permanence and efficiency in action; both of these requisites have been proven to be possessed by Gardner's Syrup.

One of the reasons for the increased physiological action of Hydriodic Acid over the alkaline iodides, may lie in the very fact of this same feeble affinity, which possibly fits it for more thorough alterative effect in the organism. This view seems to accord with that of Dr. A. Rose, of Lebanon, Ky., who says that unless Syrup of Hydriodic Acid is readily acted

upon by exposure to heat, that he would not consider it suitable to use, though after such decomposition it would, of course, be unfit to administer. There may be some so-called "Syrups of Hydriodic Acid," which besides a proportion of Hydriodic Acid, contain some other basic combination than Hydrogen, in which the preparation would be mis-named, and would be merely an iodide, with some free Hydriodic Acid present. In such case, decomposition might be retarded, but the preparation would not be Syrup of Hydriodic Acid, and consequently would not produce the therapeutic effects of the remedy; such preparations would not, of course, show the presence of free iodine with the starch test, as the iodine would be all in chemical combination, but containing an alkaline iodide, would prove irritating, and would be no improvement over iodide of potassium.

In conclusion, the statements made in the paper under consideration regarding the efficacy of Syrup of Hydriodic Acid, are simply well known truths; the very evidence which he brings forward to prove this fact, is the strongest argument he could possibly produce in favor of Gardner's Syrup of Hydriodic Acid.

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*Extract from the New England Medical Monthly, June, 1893,*  
p. 453.

#### **SYRUP OF HYDRIODIC ACID; THE FACTS.**

In the April number of the *New England Medical Monthly* is the first contribution to medical literature by Mr. R. W. Gardner that I have ever seen. In response to a request that he would inform me where I could find any paper by him on Hydriodic Acid, he writes me that he published an article entitled "Depurative Agents" in the *Doctors' Weekly*, October

1, 1892, a journal of whose existence I was ignorant. I very much doubt if any one searching the literature for Hydriodic Acid would have found this article on account of its title and also from the fact that if his so-called article is not an advertisement it very closely resembles one.

After some difficulty a few days ago I found the paper at the Academy of Medicine, although the journal is not now published. He claims that much of the matter contained in this article is reprinted in one of his advertising pamphlets of which he was kind enough to send me several. On reading the abstract it is apparent that the real subject of the paper is the antiseptic properties of iodine, substantially the view which was advanced by Duroy in 1853,\* a quarter of a century before Mr. Gardner ever manufactured the Syrup of Hydriodic Acid, and as it was Duroy's work I gave him the credit. So much for Mr. Gardner's claims for his literature.

I have read over Mr. Gardner's advertisements, and they are the first that I have ever seen, for the journal files of English, French and German therapeutical literature demand all the time that I can devote to that subject, and as I read the original papers only, I have no occasion to rely upon advertisements for information. If these advertising pamphlets are claimed as literature it is for the first time in the history of medicine this claim is advanced that advertising matter constitutes the literature of the profession. How ignorant we all have been when we have discarded the advertisements when our journal files have been bound up and how wilfully stupid have been the librarians in that they

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\*(Mr. J. L. P. Duroy, in 1853 presented to the Paris Academy of Medicine a memoir on the antiseptic properties of iodine. Apparently the "literature of 1892" of Mr. Gardner, is really quite old. See also the work of Lugol, Boinet, Velpeau, Magendie, Bevaine, Wernitz, and Julian de la Croix).

have not kept bound copies of advertisements but have chosen the literature instead. It is singularly ingenious to claim all the literature of a drug as the property of a manufacturer of a particular preparation of that drug when the said literature dates back twenty-six years before Mr. Gardner ever heard of the drug, and not only that, but papers have been published giving the results of the use of other manufacturers' products; does he claim these as well? Does he claim that because he has had extracts made for him from the records of what he is pleased to term a "past age" that no one else is at liberty to study the original papers?

A third novel proposition is the learned disquisition concerning the amount of hydriodic acid to the ounce in Syrup, ending with the statement "that a greater strength (than of his preparations) would be not only of no advantage, but a positive defect." It is needless to say that this is perfectly true from a manufacturer's standpoint.

A fourth proposition is that chemical instability is not an undesirable quality in a remedy "for (according to Dr. A. Rose,) if Syrup of Hydriodic Acid is not readily acted upon by heat it is not suitable to use." Hydriodic Acid has been used since the days of Buchanan in 1852, and had Mr. Gardner never known of it, its use would still be persisted in. Any pharmacist can make an extemporaneous preparation that will keep sufficiently long for use.

The real question at issue is what Mr. Gardner wishes to have believed concerning his preparation. In 1893 he states that his preparation "is not and never has been made by double decomposition," that is, from the formula given by Dr. W. Gill Wylie in the *Medical Record* of 1879. If that statement is true why then did he print Dr. Wylie's name upon

the labels of the bottles in which he at that time sold the Syrup of Hydriodic Acid. Shall we believe his statement of 1879, or that of 1893? Both cannot be true. Dr. Wylie never claimed to have originated the preparation, why then should Mr. Gardner? So much for his claims as an "originator." If Mr. Gardner will use in the future such language as is proper for a manufacturing chemist to the physicians from whom he receives his support, I am sure the defense of such novel propositions will create so much interest that the propriety of an attack by a manufacturer upon a physician, for trying to find out the truth of a matter, will be entirely lost sight of.

New York. Prof. REYNOLD W. WILCOX, M. D., LL. D.

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*Extract from the New England Medical Monthly, July, 1893.*

#### **SYRUP OF HYDRIODIC ACID; THE FACTS.**

In the June number of the *New England Medical Monthly* Dr. R. W. Wilcox, New York, replies to my letter published in that journal for April, 1893.

He remarks that this communication of mine, "is the first contribution to medical literature by R. W. Gardner, that I (he) had ever seen." "There are those who have eyes and see not." On April 19, 1893, he found it necessary to write me to find any literature that I had ever written upon Hydriodic Acid; in answer to which I referred him to an article published in *The Doctor's Weekly* of October 1, 1892.

This is the paper from which, by some process which he has not yet explained, a considerable amount of my original matter was reproduced in his paper, read just thirty-five days afterward, viz.: November 5, 1892, before the New York Post-Graduate Clinical Society.

The matter taken almost verbatim from my article, was attributed to Duroy.

He refers to my paper as having the appearance of an "advertisement."

The doctor exercises a nice discrimination in classifying between advertisements and literature; his own paper, read before the New York Post-Graduate Clinical Society, and subsequently published in the *Post-Graduate Journal* recommending and lauding a particular manufacturer's Syrup of Hydriodic Acid, and appropriating my thoughts and language to assist him in his effort, was I presume, not an advertisement, but literature.

In reply to the doctor's personal letter to me asking for literature, I also mailed him several copies of the pamphlet which I issue every year to the medical profession; these the doctor said he had never previously seen; I had underlined certain passages, which had been reproduced in his original paper, thinking it might be interesting to him to note the remarkable fact, that two persons should happen to express themselves in language so absolutely identical.

Whatever interest the doctor might have taken in this matter, is, unfortunately lost, owing to the fact that he classifies them as advertisements, which, it is to be regretted, he has no time to read.

In my article (I beg pardon, I should have said "advertisement,") the statement is made that "iodine has long been known as an effectual antiseptic;" by this it will be seen that I have not claimed to have been the discoverer of the antiseptic properties of iodine; I merely call attention to it as a fact well known, and then proceed to demonstrate the advantages of Syrup of Hydriodic Acid, over Iodine, as an internal antiseptic; a fact that I had never seen pointed out.

The formula given by Dr. W. Gill Wylie, in his paper in the *Medical Record*, 1879, was the only available one for

extemporaneous preparation; I was requested to improve upon it; Dr. Wylie admits that I did so, in his paper of 1879, by saying that I "had succeeded in making a preparation which keeps perfectly;" I quoted Dr. Wylie in my writings at the time, to give him the credit that was due him.

There is no contradiction between my statements of 1879 and 1893.

But Dr. Wilcox in his last communication, does not meet the charges that I make against him, viz.: That he has reproduced my original matter, word for word, in many places; and in others he has paraphrased or transposed it; he has appropriated my words and thoughts, and represented them as his own. He has put the wording in such shape and succession, that it is impossible to conceive of the possibility, by any coincidence, that he could have chosen the words and sequence of ideas by chance and arranged them in the same manner as I had previously done.

The best illustration of this, will be to show the matter, his and mine, side by side, in parallel columns.

I will state here, that matter published by myself upon Hydriodic Acid, either in my pamphlets (advertisements? for according to Dr. Wilcox, all matter not appearing in medical journals must be advertisements,) or elsewhere in medical journals, (literature? as no communication appearing in the reading columns of a medical journal can possibly be called an advertisement,) have not been drawn from the writings of Duroy, Lugol, Boinet, Velpeau, Magendie, Davaine, Wernitz, J. De La Croix, or from any outside source whatever, unless quoted. If I quote an authority, I give the credit that is due; the work of a man's brain is as much his property as his pocketbook.

#### The Parallel.

The italicized passages will enable the reader, at a glance to perceive the identity of language in the two papers.

From GARDNER'S PAMPHLET.  
9th Edition, Published January, 1892.

"Hydrogen Iodide consists of 99.22-100 parts of Iodine, and 78-100 of one part Hydrogen. *Hydriodic Acid is more active than the alkaline iodides, contains iodine in the best form for assimilative action*, is absolutely non irritant if in good condition, and is so very much superior to Iodide of potassium as an assimilant, that it only requires to be known to be fully appreciated.

If we compare the chemical constituents of Iodide of potassium and hydriodic acid, it will be seen that the *loss of appetite and consequent depression, the irritation to the fauces and mucous surfaces of the stomach, and loss of digestive power*, are all produced by the base potassium. *This neutralizes the hydrochloric acid in the gastric juice, and not only stops digestion, but acts as an irritant to all the mucous surfaces with which it comes in contact.*" \* \* \*

"Hydrogen, a natural element, and a large constituent of all the natural secretions of the body takes the place of the potassium as a carrier of the Iodine. It has an acid reaction, and does not interfere in the least with digestion, or *cause loss of appetite; consequently no depression follows its use.*

*The taste of iodide of potassium is nauseating to most patients*, and is taken with much difficulty, particularly after extensive use; *thus while the patient still requires the therapeutic action of iodine, the physician is obliged to stop its use*, because of the injurious action of the base with which it is combined.

\* \* \* "Hydriodic Acid should not be prescribed in combination with alkalies, metallic salts, or oxidizing agents, which latter would convert the Hydriodic into Iodic acid, which possesses toxic properties.

*In syphilitic diseases it may be combined with the bin-iodide of mercury, but if the proto-iodide be used, allowance must be made for its conversion into bin iodide which is a very much more active mercurial, and if not understood, might produce dangerous results.*

### SYRUP OF HYDRIODIC ACID AND ITS USES.

BY R. W. WILCOX, M. D., NEW YORK.

Read before the New York Post-Graduate, Clinical Society, November 5, 1892, and published in the *Post-Graduate Journal*, February, 1893.

The following are selected extracts from the above paper, to show identity of language.

\* \* \* "But when, in addition to its absence of disagreeable qualities, I can speak of it as a remedy that has a wider field of usefulness, presenting none of the disadvantages of the alkaline iodides, I am sure that this evening will be well spent." \* \* \*

"*It is even more active than the alkaline iodides, because it contains iodine in the best form for assimilation.*"

"We have in the past so frequently made use of the Iodide of potash that we all know from unfortunate experience its unpleasant effects; *that it produces loss of appetite; that it produces marked mental depression; that it irritates the fauces and the stomach; that it neutralizes the gastric fluids, and that it has a nauseating taste.*" \* \* \*

"*The irritation of the stomach, a much more constant symptom, may often be so great that we are obliged to omit the remedy.*" \* \* \*

"*The syrup of Hydriodic Acid is absolutely incompatible with all alkalies, all metallic salts, all oxidizing agents, as permanganate and chlorate of potash, the latter converting the hydriodic into iodic acid, which is poisonous.*" \* \* \*

"*One-half hour before eating*, the stomach is of neutral reaction. As a third point I would insist that it should be *well diluted in water*; that the dose should be dissolved in one-half wineglass, or preferably a full wineglass of water." \* \* \*

"*Syphilis in the latter stages has been treated by a large number of physicians, with this remedy. Here we note an exception to the statement made above, that we can combine it with the bin-iodide of mercury without fear of decomposition. The proto-iodide of mercury should not, however, be*

GARDNER'S PAMPHLET.

Hydriodic Acid probably passes into the circulation without change, particularly, if taken upon an empty stomach, and this is the proper time to exhibit the remedy, as no decomposition of the acid is apt to occur, owing to the absence of food products.

The proportionate arrangement of the elements constituting Hydriodic Acid is remarkable, the Acid being in fact, almost wholly iodine.

The very small proportion of hydrogen, being the true equivalent, suffices to entirely remove the irritant quality from iodine, by converting it into a non-irritant compound, from which, however, the full therapeutic action of iodine is not only obtained, but in a marvellously effective and agreeable manner.

Syrup of Hydriodic Acid should be kept in as cool a place as possible, in a refrigerator if convenient, during warm weather, and tightly corked.

From a paper contributed to the *Doctor's Weekly*, New York, Oct. 1, 1892.

BY R. W. GARDNER.

\*\*\* "Iodine has long been known as an effectual antiseptic; no micro-organisms can find lodgement, or exist in its presence; fermentive action never occurs in its preparations; aqueous solutions of iodine keep indefinitely; syrups containing it never ferment. But these cannot be used internally in sufficient quantity to produce complete, or even partial depurative and germicidal effects, owing to the irritant and caustic action of free iodine. But in the combination iodide of Hydrogen, (Hydriodic Acid,) while the iodine retains all its antiseptic and germicidal qualities, it has entirely lost its irritant properties, and is easily, even pleasantly borne, by infants and delicate females, and by its use the system may be saturated up to the point of iodism, with no inconvenience to the patient.

Its promptness of action is so great that iodine may be detected in the urine in ten minutes after its administration upon an empty stomach.

Passing at once into the circulation, it is carried to all parts of the body, and exercises its powerful influence as a depurative and germicide."

R. W. WILCOX, M. D.

used with the syrup, as it is converted into the bin-iodide, and we are not certain of the amount of the dose that we administer."

"The system can be saturated with it up to the point of iodism; it is readily absorbed and acts promptly, and from an empty stomach, without change, it passes immediately into the circulation.

"As the first important point in the mode of administration, I would emphasize the fact that it should not be given in combination.

Secondly, the time of administration is important.

"The stomach must be empty, so that it can be absorbed without the change produced by foodstuffs, for the iodates produced are toxic." (?)

"It is non-irritant, because hydrogen in small quantities neutralizes the irritant effect of the iodine."

"However it should be kept cold and tightly corked." \* \* \*

"Many years ago Duroy pointed out that Iodine was an effectual antiseptic, having a direct action on pus and organized ferment; that aqueous solutions would keep indefinitely; that its syrups do not ferment, and that in combination with syrup, while these syrups remain clear, it is no longer irritant or caustic." (?)

"We have in the past so frequently made use of the iodide of potash that we all know from unfortunate experience its unpleasant effects.

"In ten minutes even, iodine can be detected in the urine when this syrup has been administered upon an empty stomach, which is proof conclusive of its efficacy."

R. W. GARDNER,